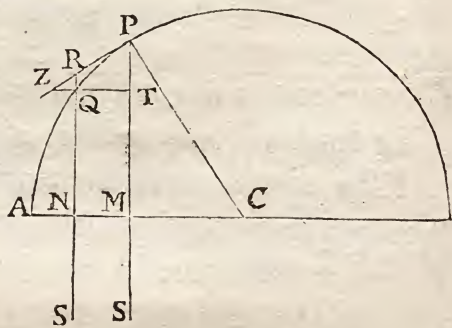


lia in $\frac{SP \text{ quad.}}{QR}$, & punctis P & Q coeuntibus, scribatur SP pro RL
 Sic fiet $\frac{SP \text{ qc}}{SA \text{ q}}$ æquale $\frac{QT \text{ q} \times SP \text{ q}}{QR}$. Ergo (per Corol. Theor. V.)
 vis centripeta reciproce est ut $\frac{SP \text{ qc}}{SA \text{ q}}$, id est (ob datum SA quad)
 ut quadrato-cubus distantiae SP. Quod erat inveniendum.

Prop. VIII. Prob. III.

Moveatur corpus in circulo PQA : ad hunc effectum requiritur lex
 vis centripetæ tendentis ad punctum adeo longinquum, ut lineæ om-
 nes PS, RS ad id ductæ, pro parallelis haberi possint.

A circuli centro C agatur semidiameter CA parallelas istas per-
 pendiculariter secans in M & N, & jungantur CP. Ob similia
 triangula CPM, & TPZ, vel
 (per Lem. VIII.) TPQ, est CPq.
 ad PMq. ut PQq. vel (per Lem.
 VII.) PRq. ad QTq. & ex natu-
 ra circuli rectangulum QR x RN
 + QN æquale est PR quadra-
 to. Coeuntibus autem punctis
 P, Q fit RN + QN æqualis 2PM.
 Ergo est CP quad. ad PM quad.
 ut QR x 2PM ad QT quad. ade-
 oq; $\frac{QT \text{ quad.}}{QR}$ æquale $\frac{2PM \text{ cub.}}{CP \text{ quad.}}$, & $\frac{QT \text{ quad.} \times SP \text{ quad.}}{QR}$ æquale
 $\frac{2PM \text{ cub.} \times SP \text{ quad.}}{CP \text{ quad.}}$. Est ergo (per Corol. Theor. V.) vis cen-



tripeta reciproce ut $\frac{2PM \text{ cub.} \times SP \text{ quad.}}{CP \text{ quad.}}$ hoc est (neglecta rati-
 one determinata $\frac{2SP \text{ quad.}}{CP \text{ quad.}}$) reciproce ut PM cub. Q. E. 7.

Scho-

Et simili argumento c
 Hyperbola vel Parabola
 bus ordinatim applicatæ
 tendentis.

Cyretur corpus in spirali P
 in angulo dato: Requir
 vis centripetæ tendentis
 trum spiralis.

Detur angulus indefin
 vus PSQ, & ob datos
 angulos dabitur specie
 SPQRT. Ergo datum
 $\frac{QT}{RQ}$, estq; $\frac{QT \text{ quad.}}{QR}$ ut
 cunq; angulus PSQ,
 subtendens mutabitur (

ipfius PR vel QT. Ergo
 hoc est ut SP. Quare Q
 rol. Theor. V.) vis cen

Parallelogramma omnia ci
 qualia. Idem intellige
 diametros ejus descript
 Constat utrumq; ex